

New Ludlovian, upper Silurian, graptolite faunas from the Los Espejos Formation, Central Precordillera, San Juan Province, Argentina: correlations and biostratigraphic remarks

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Graptolites represent one of the most important index fossils for the lower to middle Paleozoic biostratigraphy worldwide. Compared to other regions, graptolite faunas exhibited a marked decrease in diversity in Argentina during the Silurian, what resulted in reduced and low-varied registers and denied biostratigraphic works in its territory. This study introduces new Silurian graptolite faunas from the Los Espejos Formation, Poblete Norte section, Central Precordillera of Argentina. A total of thirteen graptolitic levels were identified, containing *Bohemograptus bohemicus*, *Lobograptus* sp., *Saetograptus argentinus argentinus*, *Saetograptus* cf. *S. varians*, *Uncinagraptus uncinatus notouncinatus*, *Uncinagraptus elsae* sp. nov., and *Uncinagraptus lisandroi* sp. nov. The occurrence of *Uncinagraptus* spp. in association with *B. bohemicus* could indicate the presence of the lower Gorstian *Neodiversograptus nilssoni* Biozone. A few meters above, the finding of *S. a. argentinus* in association with *S.* cf. *S. varians*, *U. u. notouncinatus*, and *Lobograptus* sp. suggest the presence of the lower Gorstian *Lobograptus progenitor* Biozone. The upper graptolitic beds yield specimens of *S. a. argentinus* and *B. bohemicus*, suggesting late Gorstian to early Ludfordian ages. These new graptolite faunas allow to correlate more precisely with local (Precordillera and Famatina), regional (North Western Argentina and Bolivia) and global equivalent sections. This discovery introduces new graptolite faunas, first-time recorded in South America, proposes for the first time a graptolite biostratigraphy for the Ludlow of Precordillera, and complements so far insufficient knowledge on Ludlovian graptolitic faunas of the continent in a critical time in the history of this fossil group.

Key words: Graptolithina, biostratigraphy, Gorstian Stage, Ludlow Series, Los Espejos Formation, Precordillera, Argentina, South America.

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